

THE ANNALS

AND

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[THIRD SERIES.]

“ per litora spargite muscum,
Naiades, et circum vitreos considite fontes :
Pollice virgineo teneros hic carpite flores :
Floribus et pictum, diva, replete canistrum.
At vos, o Nymphæ Craterides, ite sub undas ;
Ite, recurvato variata corallia trunco
Vellite muscosis e rupibus, et mihi conchas
Ferte, Deæ pelagi, et pingui conchyliis succo.”
N. Parthenii Giannettasii Ecl. 1.

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I.—*On the British Arctia.* By CHARLES C. BABINGTON, M.A.,
F.R.S., Professor of Botany in the University of Cambridge.

IN former volumes of these ‘Annals’ (ser. 1. iv. 253 ; ser. 2. xvii. 369 ; ser. 3. ii. 351) I endeavoured to define the British species of the genus *Arctium*, and hoped at the time that I had cleared up most of the difficulties attending them, but well knew that some points, and those not unimportant, remained in doubt. It is now my wish to make a few additional remarks upon these plants, because information which has been gradually obtained has shown that some of the conclusions formerly arrived at are not well founded. In the pursuit of truth we often have to alter our views ; and truth now requires me to announce a change, and to acknowledge that I have certainly been in error in not a few of my former ideas—ideas which I have continued to hold until very recently. This reconsideration of the subject has been chiefly caused by the remarks of my valued and learned correspondent, M. F. Crepin, of Gand. Before he had seen my papers in these ‘Annals,’ that eminent botanist pointed out that three well-defined species of *Lappa*, as he names the genus, exist in Belgium*, namely *Lappa tomentosa*, Lam., *L. minor*, DC., and *L. major*, Gaertn. He states that the former is well

* Notes sur quelques Plantes rares ou critiques de la Belgique, fasc. i. p. 15.

distinguished from the other two by the "renflement supérieur du tube de la corolle glanduleux, large, arrondi à la base et resserré à la naissance des dents; celles-ci dressées-conniventes; base de la corolle très-renflée, accrescente, aussi large que le sommet du fruit qu'elle couronne jusqu'à la parfaite maturité."

These characters are very well shown by a specimen contained in Wirtgen Herb. Pl. crit. select. (No. 607), to which M. Crepin refers me for an example of the true plant, except that in the dry or softened specimens I am unable to detect with perfect certainty the glands upon the inflated upper part of the corolla. I can see the probable remains of them in tolerable abundance. The corolla is very broad at the base, almost, as M. Crepin justly remarks, as broad as the top of the fruit. It narrows quickly, and is then cylindrical and slender up to the insertion of the stamens; there it is suddenly enlarged to a great extent, then narrows slightly upwards, and is again somewhat suddenly contracted (constricted, narrowed as if by the pressure of a string) at the base of the teeth, which do not spread, but rather converge round the cohering anthers.

M. Crepin also states that the petioles of the radical leaves of the true *A. tomentosum* are hollow.

A plant long cultivated, or rather naturally reproducing itself, in the Cambridge Botanic Garden appears to me to be the *Lappa tomentosa* (Lam.), as defined by M. Crepin. Its inflorescence is corymbose, the central stem and (most, if not all) the branches ending in corymbs raised upon long leafless stalks. Occasionally there is a small leaf at the base of the corymb, and sometimes a leaf, or rather bract, is found upon one or more of its branches, or at the base of one or more of the heads. The stem and all its subdivisions are covered by a tolerably thick coat of short crisped pubescence. The heads are nearly spherical, with the under side slightly flattened when young. By the time that the flowers expand, they have become umbilicate at the base, and, of course, widened at the top, but otherwise retain their very spherical shape: measured in their widest part (from the end of the spinous hooked phyllaries of one side to those of the other), they are about an inch in diameter, or less. They are always very thickly covered with a fine white web.

The corolla is broad at the base, but narrows immediately: its divisions are about equal in length—the lower slender and cylindrical, the upper very much inflated from its rounded base to the base of the teeth, where it is again narrowed in a marked manner; the teeth themselves converge and clasp the stamens. This inflated part of the corolla is covered with minute "glands," which are not easily seen except by the aid of a powerful glass.

The petiole has the usual angles, but they are only slightly

prominent; and the upper side cannot be called furrowed, for it is not more excavated than the other spaces (if so much), and there is a faint ridge in its middle. The petiole has a rather small oval tube running through it. The proportions of the leaf are 8 in length by 7 in breadth, exclusive of the basal lobes, which project downwards considerably. It is not very wavy at the margin, which is fringed with rather distant minute teeth. It is flat in its general position, nearly naked above, covered with fine cobweb-like down beneath.

The true *A. tomentosum* is a rare plant in France and Belgium. Fries marks it as universally distributed in Denmark, Gothland, Norway, and Sweden.

Reichenbach's plate is inconclusive. Indeed all his figures intended to illustrate the species of this difficult genus are far from being satisfactory. They represent only pieces of the plants, and do not give any good details of the flowers. His plate of *L. tomentosa* does not enable us to decide upon the identity or otherwise of his plant and that of Lamarck, Willdenow, and Crepin.

The radical leaf of a specimen of *L. tomentosa* received from Mr. J. Lange, of Copenhagen, is 10 inches long, without the basal lobes, which extend about 2 inches downwards; the broadest part of the leaf is at the insertion of the petiole, where it is 8 inches wide; it narrows gradually upwards, but is blunt at the end. Apparently it is not very, if at all, wavy at the edge; nor is it either lobed or crenate, but is fringed with rather distant, small, sharp, rigid apiculi.

As far as I have been able to learn, we cannot claim this plant as a native of Britain; and it becomes necessary to try and determine the real denomination of the plant which I have hitherto called by that name.

Before entering upon this question, it may be well to state the reasons which caused me to believe that *A. tomentosum* was a native of this country.

Sir J. E. Smith published (Eng. Bot. t. 2478) a plate and description of a plant, obtained from near Beccles, with the name of *Arctium Bardana* (Willd.), which is a synonym of the older name, *Lappa tomentosa* (Lam.). As far as I could judge, he was correct in his nomenclature, except that he had overlooked the older name. I therefore drew up, from specimens of what seemed to be the plant of 'English Botany,' the description of my *A. tomentosum*, being confirmed in my belief of being correct by finding that that plate was constantly quoted without doubt as a representation of the plant of Lamarck and Willdenow. No person seems to have suspected that it was not exactly a figure of any real species; but we now learn from the original

drawing, preserved in the Botanical Department of the British Museum, that Smith (as was unfortunately too common) caused Sowerby to alter his drawing before making the engraving, by adding greatly to the wool on the heads, making the florets protrude more from the involucre, and drawing them with the limb of the corolla more inflated. (The plate of *A. Lappa* is much more altered, and therefore even less satisfactory.)

The first fact that shook my confidence in the correctness of my nomenclature was the discovery that a very different plant was cultivated in the Cambridge Botanic Garden as *A. tomentosum*; and I soon also found wild plants exactly like my *A. tomentosum*, but nearly or quite devoid of web-like down. This astonished me considerably; but as I had been taught to consider such down as very variable in quantity, and as Fries says ('Nov.' 264) that the heads are sometimes nearly glabrous, I supposed the name to be bad, and the species to exist sometimes with webbed and sometimes with glabrous heads. But what still more surprised me was my not being able latterly to find any plants of the supposed *A. tomentosum* possessing the web. In the third of his fasciculi of 'Notes,' M. Crepin remarks with wonder that I have not taken any notice of the peculiar shape and glandular condition of the corolla of *A. tomentosum*, and also that I state the petioles of that plant to be solid; whereas he finds that structure of the corolla and a hollow petiole to be always present in his (the true) *L. tomentosa*. After a careful reconsideration of these remarks, and a re-examination of my specimens and of living individuals, I have convinced myself that my *A. tomentosum* is not the plant of Lamarek and Willdenow, and that the figure in 'Eng. Bot.' of *A. Bardana* is incorrect. I think that our *A. tomentosum* must be joined to *A. majus*. There is often considerable difference in the look of the plants, but next to none in characters—certainly not more, as I now think, than will admit of their being forms of one species.

If, therefore, my *A. tomentosum* is only a state of *A. majus*, that species is much simplified. It is the only British species which has the heads arranged in a corymb, and has constantly solid petioles. In what I consider as its typical form, the involucre are quite glabrous and green, and are so full of fruit as to be hemispherical and very open at the top when the fruit is ripe. In the other form (my former *A. tomentosum*) the involucre are sometimes, although rarely, webbed, are always purplish, and are nearly spherical even when the fruit is ripe, owing apparently to the smaller quantity of fruit produced. These two forms seem to be reproduced from seed without much, if any, alteration: and probably some botanists will think that I might retain them as species; but that is not now my opinion.

All our other species have a racemose inflorescence and more or less hollow petioles, never truly solid like those of *A. majus*. M. Crepin expresses doubts concerning two of them (my *A. intermedium* and *A. pubens*), and it is therefore necessary to pass them carefully in review. It will be seen that such a review leads to material changes in the nomenclature, but leaves the plants otherwise very much as they were.

A. minus does not require any notice. Examination leaves it unchanged, except that the remark should be added that the young heads are not umbilicate, but nearly flat below. It is often a large plant, but has very small heads arranged in a raceme.

I formerly stated that the lower leaves of my *A. intermedium* were roundish cordate, and apparently shorter in proportion to their length than those of the other species. These statements are erroneous. At that time I had scarcely any knowledge of the true radical leaves—indeed, had probably never seen them. The only tolerably large leaf on my specimen from Berwickshire is not nearly radical, but has a flowering branch springing from its axil; and my other specimens are equally destitute of the lower leaves. My acquaintance with the plant was confined to the possession of a few dry specimens.

During a recent visit to Caernarvonshire, my friend Mr. Newbould directed my attention to an *Arctium* which is abundant about Llanberis, and expressed his belief that it is the *A. intermedium*. He is to a considerable extent correct in this idea, for it does seem to be my *A. intermedium*; but it is not that of Lange, as is shown by his plate in the 'Flora Danica' (t. 2663). Most probably our *A. intermedium* is the *A. nemorosum* of Lejeune. It accords admirably with his character and remarks (Compend. Fl. Belg. iii. 129); its young heads are "ovate" and "floccose," and ultimately become thick and large; in arrangement they are "interrupte racemosa subspiciformia;" its radical leaves are "cordate-oblong;" its stem is nearly erect. Thus our plant has all the special characteristics of *A. nemorosum* except "foliis utrinque viridibus," for they are white beneath. We shall therefore probably be justified, indeed I might say required, to give Lejeune's name to the English *A. intermedium*.

Lange's specimen accords very well with his plate in 'Flora Danica.' It has a very different radical leaf from the supposed *A. nemorosum*. Were that not the case, they might probably be combined. As I have found the form of those leaves to be very constant, I cannot admit of such a union, although it is suggested by M. Crepin. Reichenbach's plate of *A. intermedium* doubtless represents the true plant. The leaves of *A. intermedium* are deeply cordate, not cordate-oblong.

The *A. nemorosum* has leaves much longer in proportion to

their width than those of the other species, and they even seem narrower than they really are, from the sides being turned up in such a manner as to present their edges to the spectator. When so seen alive, the leaf therefore appears exceedingly long and narrow. In the other species I believe that the leaves are nearly flat, except that they form a slight angle at the middle, and the basal lobes are often incurved. Also the leaves of *A. nemorosum* are blunter than those of the others. These facts give a very characteristic appearance to the leaves, and are apparently their constant condition. We examined very many individuals, and always found this kind of leaf upon them. A large leaf now before me, which has, of course, been flattened in its preparation for the herbarium, measures $12\frac{3}{4}$ inches from the top of the petiole to its upper extremity, and is 9 inches in width at a third of its length from the base. In the lower and second third it narrows very gradually, and not much quicker until the tip is nearly approached. The basal lobes extend downwards, and add fully three inches to the total length of the leaf, which thus is nearly 16 inches long. Before this leaf was flattened, it seemed to be about three inches narrower. A smaller leaf has precisely the same proportions, except that it is even a little more decidedly oblong. The petiole is nearly flat above, rather angular, and traversed by a small roundish tube. The heads, when in flower, are narrower and more ovoid than those of the other plants, because the actual flowers are scarcely inflated in their upper part, and therefore pack very closely together. These flowers (florets) are about equally divided into the slender tube and the narrow cylindrical limb; they scarcely protrude their corollas beyond the involucre, which is nearly flat-based, only slightly webbed, and green. As the seed ripens, the head increases in width more than in length, so as to become much broader than long. It continues to be nearly truncate at the base, and is so far open at the top as clearly to show the ripe fruits. The involucre often remains green, or becomes slightly tinged with purple, except the innermost phyllaries, which are purplish, thin, flat, scarcely hooked, and about as long as the others. The fruit is rugose, covered with blackish spots, narrowing very gradually from the base to the top. All the heads are very shortly stalked, and usually form a compact cluster of about three at the top, although occasionally there is only one there. The central stem has them arranged in a long narrow raceme; so also the branches.

I consider that this plant may be known by the subconvolute leaves, its narrow raceme, nearly sessile heads, close terminal group of heads, and the cylindrical (not inflated) limb of the corolla.

M. Crepin considers the *A. nemorosum* (Lej.) to be the same plant as the *A. intermedium* (Lange); but I very much doubt the correctness of that opinion. Lejeune says "anthodiis ovatis interrupte racemosis spiciformibus," which cannot easily be made to apply to my *A. pubens*, which likewise Crepin combines with *A. intermedium* and *A. minus*; nor to the plate of *A. intermedium* given by Lange in the 'Flora Danica.' The inflorescence of these plants is doubtless racemose, but certainly not spiciform. I do not consider the cluster of heads at the end of each branch to be of the least value as a character; for a spike-like raceme easily acquires that structure.

I still think that my *A. pubens* is distinct from *A. minus*, notwithstanding M. Crepin's remarks. It has the structure of the true *A. intermedium* of Lange, and apparently ought to bear that name. Its heads are at least double the size of those of *A. minus*. Lange defines his plant as follows (Fl. Dan. t. 2663):—" *Lappa elata robusta saturate viridis vel sæpe purpurascens, foliis inferioribus magnis cordatis leviter remoteque dentatis, inflorescentia racemosa arcuate nutante, calathiis magnis leviter arachnoideis, junioribus globosis, defloratis ovatis, achenio quam in *L. minore* duplo majore.*" The leaf, as figured, measures 3 inches in length by $2\frac{1}{2}$ in width at a little above the insertion of the petiole. The raceme ends in two nearly or quite sessile heads; but the stalks of the heads become successively longer as they are more distant from the top, just as in my *A. pubens*. I consider the plate in the 'Flora Danica' to be a good representation of my *A. pubens*, except that I have not noticed the clustering of heads at the top of the raceme; and, as already stated, I do not consider this as affording any good character for a species. Doubtless the leaves of *A. pubens* are very like those of *A. minus*, being only rather broader and less acute. The inflorescence of *A. minus* is racemose, but it has not the pyramidal form caused by the longer lower peduncles of *A. pubens*. Its heads are all seated upon nearly equally short stalks, and its raceme may be called spiciform. I believe therefore that *A. pubens* is the true *L. intermedium* of Lange, and ought to bear that name. Crepin thinks that the length of the peduncles varies according to the strength of the individual plant; but my observations do not lead me to the same opinion. With us *A. minus* often rises to a greater height than either of the other plants, nevertheless it seems always to retain its shortly stalked heads. My *A. pubens* is usually a plant of rather small stature, although robust, and its lower are always seated upon much longer stalks than its upper heads.

The leaf of *A. majus* is different in proportion from those of *A. minus* and *A. nemorosum*. It is very uniform in shape: one

now before me is 12 inches long (exclusive of the lobes, which add $2\frac{1}{2}$ inches to the length); its width at the insertion of the petiole is also fully 12 inches, and it narrows gradually and uniformly from thence to near the tip, when it suddenly contracts to a blunt end. It is therefore much broader in proportion to its length than the leaves of those plants. As already stated, its petiole is always solid. The hollow petioles of the others have the woody fibres collected towards the circumference, there being none even adjoining the tubular central space, which is bounded by cellular tissue, although well defined in form and apparently not a result of the mere rupture of that tissue.

It only remains to define the species as I understand them. The following table may be of use as pointing out the characters by which they may usually be known.

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| 1. Upper division of the corolla inflated, rounded at the base, constricted below the teeth, glandular; base of the corolla much widened. Inflorescence corymbose. | <i>A. tomentosum</i> . |
| Upper division of the corolla not inflated or rounded at the base, bell-shaped or cylindrical, not constricted or glandular; base of the corolla not much widened | 2. |
| 2. Inflorescence corymbose. Petioles solid | <i>A. majus</i> . |
| Inflorescence racemose. Petioles hollow | 3. |
| 3. Radical leaves cordate-oblong. Heads subsessile | <i>A. nemorosum</i> . |
| Radical leaves cordate. Heads manifestly stalked | 4. |
| 4. Inflorescence racemose. Heads all shortly stalked, small | <i>A. minus</i> . |
| Inflorescence racemose-pyramidal. Lower heads long-stalked, uppermost subsessile | <i>A. intermedium</i> . |

1. *A. tomentosum* (Schkr.); *inflorescentia corymbosa, capitulis pedunculatis arachnoideis, squamis involucri floribus brevioribus, parte superiore corollæ glandulosa ad basin ventricosa sub dentibus constricta tubum ejus æquante, tubo corollæ ad basin fructus latitudinem subæquante, petiolis fistulosis, foliis radicalibus cordato-ovatis subintegræ apiculato-dentatis.*

A. tomentosum, Schkr. *Handb.* iii. 49, t. 227 (1803); *Pers. Syn.* ii. 383 (1807).

A. Lappa, *Fl. Dan.* t. 642; *Sven. Bot.* t. 63.

A. Bardana, *Willd. Sp. Pl.* iii. 1632 (1800).

Lappa tomentosa, *Lam. Fl. Fr.* ed. 1. ii. 37 (1778); *DC. Prod.* vi. 661; *Rchb. Icon. Fl. Germ.* xv. 80.

L. major ex omni parte minor capitulis parvis eleganter reticulatis, *Dillen. in Raii Syn.* ed. 3. 197.

Bardana capite araneoso. Cobweb-headed Burdock, *Pet. Eng. Pl.* t. 23. f. 6.

Stem about 3 feet high; top and each of the branches ending in a well-formed corymb of heads. Heads rather small, spherical, umbilicate, very thickly webbed. Radical leaves rounded at

the end, not much longer than broad*, nearly entire, edged with numerous rigid apiculi.

I have very little doubt of this being the plant intended by Ray or, rather, Dillenius and Petiver. It is stated in the 'Synopsis' to have been found by Mr. J. Sherard; but no place is mentioned. Its claims to be an English plant rest upon this very slender authority; and I think that it should not be admitted into our lists at present, although not an unlikely plant to inhabit this country.

2. *A. majus* (Schkr.); *inflorescentia laxe subcorymbosa, capitulis pedunculatis glabris vel subglabris (maximis), squamis involucris flores subæquantibus, parte superiore corollæ quam tubus ejus multo brevioris campanulato glabro ad basin attenuato sub dentibus nunquam constricto, tubo corollæ undique fructu multo angustiore, petiolis farctis, foliis radicalibus cordatis subintegris apiculato-dentatis.*

A. majus, Schkr. *Handb.* iii. 49 (1803); *Fries*, *Nov.* 264.

A. Lappa, Willd. *Sp. Pl.* iii. 1631.

A. tomentosum, Bab. in *Ann. Nat. Hist.* ser. 2. xvii. 371; *Man. Br. Bot.* ed. 4. 184.

Lappa major, Gaert. *Fruct.* ii. 379, t. 162 (1791); *DC. Prod.* vi. 661 (1837).

L. officinalis, Rchb. *Icon. Fl. Germ.* xv. 54, t. 81.

Bardana vulgaris. Burdock, *Pet. Eng. Pl.* t. 23. f. 1.

Stem 3-4 feet high; top and usually most of the branches ending in loose irregular corymbs of heads. Heads large, spherical when in flower, but not umbilicate, often hemispherical with fruit, usually quite naked, but sometimes slightly webbed, green or purplish. Radical leaves blunt, as broad as or broader than long, broadest at the insertion of the petiole; petioles quite solid, with prominent angles, deeply furrowed above.

Possibly Gaertner's plant was not of this species; for he quotes 'Fl. Dan.' (642). But his figure shows no wool on the head. When he wrote, the species were not distinguished.

This is the only species which is known to possess solid petioles.

This seems to be pretty generally distributed, but is not so frequent as *A. minus*.

3. *A. intermedium* (Lange); *inflorescentia racemoso-pyramidalis, capitulis arachnoideis inferioribus longe pedunculatis summis subsessilibus, squamis involucris flores æquantibus, parte superiore corollæ tubo ejus subæquali campanulata ad basin*

* In measuring the leaves, the basal lobes are omitted in all cases. The base of the leaf is considered to be the point where the petiole is inserted.

attenuata sub dentibus nunquam constricta glabra, tubo corollæ undique fructu multo angustiore, *petiolis fistulosis, foliis radicalibus cordatis grosse crenatis crenis apiculatis*.

A. intermedium, *Lange, Dansk. Fl.* ed. 1. n. 1000 (1850).

A. pubens, *Bab. in Ann. Nat. Hist.* ser. 2. xvii. 376 (1856); *Man. Br. Bot.* ed. 4. 185.

Lappa intermedia, *Rehb. Icon. Fl. Germ.* xv. 54, t. 81; *Fl. Dan.* t. 2663.

Stem 3–4 feet high, erect to the top, and, as well as the spreading branches, racemose; lower peduncles longest. Heads rather large, ovoid, not umbilicate, hemispherical with fruit, greenish, clothed with a thick web when young, but becoming nearly naked afterwards. Corolla nearly cylindrical in the upper enlarged part, but narrowing gradually below into the tubular slender lower part. Radical leaves rather acute, about as long as broad, broadest at the insertion of the petiole; petioles hollow, scarcely angular, only slightly but broadly furrowed above.

The very broad, rather acute, radical leaves with hollow petioles, and the rather large heads arranged in a racemose, not subspicate, manner, will usually distinguish this plant, which is probably not of uncommon occurrence.

4. *A. nemorosum* (Lej.); *inflorescentia spicato-racemosa, capitulis subsessilibus arachnoideis, squamis involucri flores æquantibus, parte superiore corollæ tubo ejus subæquali subcylindrica sub dentibus nunquam constricta glabra, tubo corollæ undique fructu multo angustiore, petiolis fistulosis, foliis radicalibus cordato-oblongo-ovatis subconvolutis grosse crenatis crenis apiculatis*.

A. nemorosum, *Lej. Compend. Fl. Belg.* iii. 129 (1836).

A. intermedium, *Bab. in Ann. Nat. Hist.* ser. 2. xvii. 374; *Man. Br. Bot.* ed. 4. 184.

Stem 3–4 feet high, its top and the tops of the branches usually nodding, bearing spike-like racemes of nearly sessile heads. Heads intermediate in size between those of *A. majus* and *A. minus*, ovoid with flowers, not umbilicate, much depressed with fruit (then often twice as broad as long), green or purplish, usually clothed with a thick web. Radical leaves blunt, a third longer than broad, about equally broad throughout the lower two-thirds, somewhat convolute; crenatures very broad, but shallow, usually emarginate; petioles hollow, slightly angular, scarcely furrowed above.

The long nearly parallel-sided leaves with very broad but very shallow lobes or crenatures, each lobe being usually (if not

always) slightly emarginate with an apiculus in the notch, together with the spike-like arrangement of the heads, are marked characteristics of this species, which is very abundant in the valley of Llanberis, Caernarvonshire. I have seen what is apparently the same plant from Hope in Derbyshire, Berwick-upon-Tweed, Bembridge in the Isle of Wight, and Edinburgh; but I have not seen the radical leaves of either of these plants.

5. *A. minus* (Schkr.); inflorescentia racemosa, capitulis brevipedunculatis arachnoideis (parvis), squamis involucri floribus brevioribus, parte superiori corollæ tubo ejus subæquali subcylindrica ad basin attenuata sub dentibus nunquam constricta glabra, tubo corollæ ad basin fructu multo angustiore, petiolis fistulosis, foliis radicalibus cordato-prolongis grosse dentatis dentibus apiculatis.

A. minus, Schkr. *Handb.* iii. 49 (1803); *Fries*, Nov. 263.

A. Lappa α , Linn. *Fl. Suec.* ed. 2. 277 (teste *Fries*).

A. Lappa, *Curt. Fl. Lond.* ii. 173 (fasc. iv. 55); *Woodv. Med. Bot.* t. 15.

Lappa minor, DC. *Fl. Fr.* iv. 77; *Prod.* vi. 661; *Fl. Dan.* t. 2662. *Bardana capite minore*. Small-headed Burdock, *Pet. Eng. Pl.* t. 23. f. 3.

Stem often 4-5 feet high, its top and the tops of the branches usually nodding, bearing rather loose racemes of heads. Heads small (usually about the size of a hazel-nut), ovoid with flowers, not umbilicate, mostly globular with fruit, greenish, usually much webbed. Radical leaves acute, longer than broad, broadest at one-third above the insertion of the petiole; teeth very broad but shallow; petioles hollow, slightly angular, scarcely furrowed above.

This common plant is known by its small ovoid racemose stalked heads, and its very coarsely dentate, not crenate, leaves.

II.—*New Land-Shells from Travancore, Western and Northern India*. Described by W. H. BENSON, Esq., Retired List, Bengal Civil Service.

1. *Helix Basilessa*, B., n. sp.

H. testa anguste umbilicata, solida, depressa, striatula, sub epidermide luteo-fusca purpurascente, subtus versus umbilicum albida; spira convexiuscula, apice valde obtuso, sutura impressiuscula, demum impressa; anfractibus 5, rapide accrescentibus, ultimo antice leviter descendente, dilatato, subtus demum subplanato, supra peripheriam fascia castanea superne albida munito; apertura obliqua, transversim oblonge ovato-lunata, intus fuscescente,